

CLAIMS

What is claimed:

1. A method for providing instant services in an Internet Protocol network, the method comprising:

5 provisioning a first communication session between a first user terminal and a predetermined network device;

provisioning a second communication session between a second user terminal and the predetermined network device;

10 receiving an activation request to establish an active communication session between the first user terminal and the second user terminal;

15 bridging the first communication session to the second communication session on the predetermined network device.

2. A computer readable medium having stored therein instructions to execute the method of claim 1.

3. The method of claim 1, wherein the first communication session comprises a first real-time transport protocol session, and the second communication session comprises a second real-time transport protocol session.

20 4. The method of claim 1, prior to provisioning the first communication session, further comprising:

receiving a first registration request from a user associated with the first user terminal;

authenticating the first user in accordance with a first user account for the user associated with the first user terminal;

receiving a first subscription request from the user associated with the first user account, wherein the first subscription request comprises a request to subscribe to a first service.

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5. The method of claim 4, wherein the first service comprises a multimedia service.

6. The method of claim 5, wherein the multimedia service comprises an instant voice messaging service.

7. The method of claim 4, further comprising:
receiving a first registration request from a user associated with the second user terminal;
authenticating the user in accordance with a first user account for the user associated with the second user terminal;

receiving a first subscription request from the user associated with the second user terminal, wherein the first subscription request comprises a request to subscribe to the first service using a first subscriber identification.

8. The method of claim 7, further comprising:
receiving a second subscription request from the user associated with the second user terminal, wherein the second subscription request comprises a request to subscribe to the first service using a second subscriber identification;

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provisioning a third communication session between the second user terminal and the predetermined network device.

9. The method of claim 1, further comprising:

5 providing a first list of subscribers to the first user terminal, the first list of subscribers including subscriber identifications associated with active subscribers authorized to communicate with the user associated with the first user terminal; and

providing a second list of subscribers to the second user terminal, the second list of subscribers including subscriber identifications associated with active subscribers authorized to communicate with the user associated with the second user terminal.

10. The method of claim 1, wherein the first user terminal comprises a signaling agent, and the step of receiving the request to establish an active communication session between the first user terminal and the second user terminal comprises:

receiving a user input to establish the active communication session to the second user terminal;

sending the request to establish the active communication session between the first user terminal and the second user terminal from the signaling agent to the predetermined network device.

11. The method of claim 10, wherein the signaling agent comprises a Session Initiation Protocol (SIP) agent.

12. The method of claim 1, wherein the first user terminal is associated with a virtual signaling agent, and the step of receiving the request to establish an active communication session between the first user terminal and the second user terminal comprises:

receiving on the first user terminal a user input to establish the active communication session to the second user terminal;

sending to the virtual signaling agent a request to establish the active communication session;

sending from the virtual signaling agent to the predetermined network device the request to establish the active communication session between the first user terminal and the second user terminal.

13. The method of claim 1, further comprising:

receiving a request to terminate the active communication session between the first user terminal and the second user terminal; and

un-bridging the first communication session from the second communication session on the predetermined network device.

14. The method of claim 1, wherein the step of provisioning the first communication session and the second communication session comprises setting up the first and second communication sessions between the first and second user terminals and the predetermined network device prior to receiving the receiving the activation request.

15. The method of claim 1, wherein the first user terminal is associated with a first predetermined device and the second user terminal is associated with a second predetermined device, and wherein the first communication session is provisioned between the first user terminal and the first predetermined device, and the second communication session is provisioned between the second user terminal and the second predetermined device, and the step of bridging the first communication session to the second communication session comprises bridging the sessions via the first predetermined device and the second predetermined device.

16. A method for providing instant services in an Internet Protocol network, the method comprising:

receiving on a presence server from a first user terminal a request to subscribe to a multimedia service;

sending from the presence server to a conference server a request to provision a first communication session between the first user terminal and the conference server;

provisioning the first communication session between the first user terminal and the conference server responsive to receiving the request;

providing online status information associated with a user associated with the first user terminal to at least one user authorized to receive the online status information;

provisioning a second communication session between the conference server and a second user terminal;

providing online status information associated with a user associated with the second user terminal to the user associated with the first user terminal;

receiving on the conference server an activation request to establish an active session between the first user terminal and the second user terminal;

bridging the first communication session to the second communication session on the conference server.

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17. The method of claim 16 wherein the step of bridging the first communication session to the second communication session comprises enabling half-duplex communications from the first user terminal to the second user terminal.

10 18. The method of claim 16, further comprising authenticating the user associated with the first user terminal before sending the request to provision the first communication session between the first user terminal and the conference server.

15 19. The method of claim 16, wherein the activation request comprises a request from the user associated with the first user terminal, and the method further comprises determining if the user associated with the second user terminal is available prior to bridging the first communication session to the second communications session.

20 20. The method of claim 16, further comprising:

provisioning a third communication session between the conference server and a third user terminal;

receiving on the conference server an activation request to establish active sessions between the first user terminal, the second user terminal and the third user terminal; and

bridging the first communications session to the second communication session and the third communication session.

21. The method of claim 16, wherein the first communication session and the second
5 communication session comprise real-time transport protocol sessions.

22. The method of claim 16, wherein the request to subscribe comprises a request to subscribe to a predetermined service.

23. The method of claim 22, wherein the predetermined service comprises an instant
10 voice messaging service.

24. A system for providing instant services in an Internet Protocol network, the system comprising:

15 a conference server configured to provision at least one communication session to a first user terminal and a second user terminal, the conference server being further configured to bridge the at least one communication session between the first user terminal and the second terminal upon receiving a communication session activation request, and further to un-bridge the sessions upon receiving a deactivation request;

20 an authentication server configured to authenticate user requests;

a presence server configured to store user profiles, to track user status information associated with user terminals, and to provide the user status information to authorized user, the presence server being further configured to receive a communication session activation request

and, responsively, to determine an availability of at least one destination terminal specified in the request, wherein, if the at least one destination terminal is available the presence server is configure to forward the request to the conference server.

5 25. The system of claim 24, further comprising a second conference server, and the presence server is further configured to maintain a state and availability of each conference server.

10 26. The system of claim 25, wherein the presence server is further configured to manage the assignment of conference servers to user terminals upon receiving registration and subscription requests from the users associated with the user terminals.

15 27. The system of claim 24, further comprising:
at least one signaling user agent configured to provide control protocol and signaling interface between the user terminal, the conference server and the presence server.

20 28. The system of claim 27, wherein the at least one signaling user agent comprises at least one Session Initiation Protocol user agent.

25 29. The system of claim 27, wherein the first user terminal comprises a first signaling user agent, and the second user terminal comprises a second signaling user agent.

30. The system of claim 28, wherein the at least one signaling user agent comprises a virtual user agent.

31. The system of claim 30, wherein the virtual user agent comprises a user agent
5 located remotely from the user terminal.

32. The system of claim 30, wherein the virtual user agent is remotely controlled by the user terminal, and comprises a remote control protocol, a remote interface, and a remote media transport function.

33. The system for providing real-time data transmission in an Internet Protocol network, the system comprising:

a plurality of conference servers comprising a first conference server and a second conference server, the first conference server configured to provision at least one communication session to a first user associated with a first user terminal, and the second conference server configured to provision at least one communication session to a second user associated with a second user terminal, the first conference server and the second conference server being further configured to bridge the at least one communication session between the first user terminal and the second user terminal upon receiving a communication session activation request, and further
15 being configured to un-bridge the sessions upon receiving a communication session deactivation request;

a presence server configured to assign the first user to the first conference server and the second user to the second conference server upon receiving registration requests from the first

user and the second user, the presence server being further configured to receive from the first user a communication session activation request to establish a communication session with the second user and, responsively, determine an association of the second user with the second conference server and an association of the first user with the first conference server, and the presence server being further configured to send a first request to the first conference server and a second request the second conference server, wherein the first request comprises a request to bridge the at least one communication session provisioned for the first user to the second conference server, and the second request comprises a request to bridge the at least one communication session provisioned for the second user to the first conference server.

34. The system of claim 33, wherein the presence server is further configured to determine an availability of the second user terminal upon receiving the communication session activation request from the first user, and wherein the presence server is configured to send the first request to the first conference server and the second request to the second conference server if the second user is available.

35. The system of claim 33, wherein the at least one communication session provisioned for the first user terminal and the at least one communication session provisioned for the second user terminal comprise a real-time transport protocol sessions.